

HomeScape Plant Picker

A MINI PROJECT REPORT

Submitted by

KISHORE KUMAR V - 220701512

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of

BACHELOR OF ENGINEERING

IN

COMPUTER SCIENCE AND ENGINEERING



**RAJALAKSHMI
ENGINEERING COLLEGE**
An AUTONOMOUS Institution
Affiliated to ANNA UNIVERSITY, Chennai

RAJALAKSHMI ENGINEERING COLLEGE

AUTONOMOUS, CHENNAI

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BONAFIDE CERTIFICATE

Certified that this mini project “**HomeScape Plant Picker**” is the bonafide work of
“**KISHORE KUMAR V (220701512)**” who carried out the project work under my supervision.

SIGNATURE

Mrs.V. JANANEE,
Assistant Professor,
Computer Science & Engineering,
Rajalakshmi Engineering
College(Autonomous),
Thandalam, Chennai - 602 105

Submitted for the Practical Examination held on _____.

INTERNAL EXAMINER

EXTERNAL EXAMINER

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I also extend my sincere and hearty thanks to my internal guide **Mrs. JANANEE V** for her valuable guidance and motivation during the completion of this project.

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Kishore Kumar V (2116220701512)

ABSTRACT

The HomeScape Plant Picker is a web-based recommendation system tailored to help users choose the most suitable plants for their home environments. By integrating factors like sunlight exposure, space availability, water requirements, and eco-friendliness, the platform delivers personalized plant recommendations. Aiming to enhance user experience, the platform interacts with users through a series of questions that capture essential environmental and personal preferences, enabling informed plant selection.

The platform's interface, developed using HTML, CSS, JavaScript, and Bootstrap, provides a seamless user experience. Through this front-end setup, users can easily interact with the system, respond to questions, and receive plant suggestions that match their needs and space constraints. Behind the scenes, PHP and MySQL manage data processing and storage, ensuring efficient handling of user inputs and facilitating quick retrieval of plant information from the database.

HomeScape Plant Picker not only simplifies plant selection for users but also fosters sustainable gardening practices by promoting eco-friendly plant choices. This project offers a practical solution to support sustainable living, allowing users to enhance their home environments with thriving green spaces suited to their conditions and lifestyle preferences.

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CHAPTER 1

INTRODUCTION

1.1. INTRODUCTION

The HomeScape Plant Picker project modernizes traditional horticultural practices by merging them with advanced technology to simplify plant selection for indoor and outdoor home environments. Drawing on principles from agriculture and environmental science, the platform utilizes data-driven algorithms to recommend plants based on sun exposure, water needs, soil requirements, and the user's lifestyle preferences. This integration of horticultural science with technology automates the decision-making process for plant selection, making it accessible for both novice and experienced gardeners. By promoting eco-friendly plant choices, the platform not only encourages sustainable gardening but also fosters a deeper connection to nature for users.

This project aims to design an intelligent plant recommendation platform that combines horticultural expertise with predictive algorithms, supporting users in selecting plants that thrive under their specific environmental and care conditions. Leveraging data science and machine learning approaches commonly applied in agriculture, the system adapts personalized recommendations for home gardening, considering unique user preferences and maintenance capabilities. By bridging horticultural practices with modern ecological needs, HomeScape enhances urban gardening, aiding users in building sustainable green spaces while advancing the field of intelligent horticulture.

1.2. SCOPE OF WORK

The scope of the HomeScape Plant Picker project encompasses the design, development, and deployment of a full-stack web application dedicated to intelligent plant recommendations. This application is modular, featuring distinct sections for plant selection, environmental assessment, care guidance, and eco-friendly recommendations.

The plant selection module enables users to find plants suited to their unique conditions, such as sunlight exposure, water needs, and available space. The environmental assessment module gathers data from users on their home's environment and maintenance capabilities, which is then processed by predictive algorithms to recommend optimal plant choices. The care guidance section provides detailed instructions on plant maintenance, while the eco-friendly recommendations section highlights sustainable plant options.

The system also includes administrative functionality, allowing moderators to manage the plant database by updating plant profiles and information on growth conditions. Additionally, the application supports user account management, enabling users to track their selected plants, access care instructions, and save preferences for future recommendations. This scope of work ensures that users, both beginners and experienced gardeners, have a seamless and enriching experience in selecting and caring for plants, while promoting sustainable gardening practices.

1.3 AIM AND OBJECTIVES

The HomeScape Plant Picker project aims to develop a full-stack web application that simplifies and enhances the process of selecting home-growable plants based on individual environmental conditions and preferences. This platform is designed to provide users with a seamless, intelligent, and eco-friendly plant recommendation experience, with a user-friendly interface and efficient backend management.

Objectives:

1. Develop modules for plant selection, environmental assessment, and care guidance to provide tailored plant recommendations based on sunlight, water needs, space availability, and user preferences.
2. Create an admin interface for moderators to manage the plant database, enabling efficient updates to plant profiles, growth conditions, and eco-friendly recommendations.
3. Implement user account management, allowing users to save preferences, track selected plants, and access personalized plant care instructions.
4. Incorporate a sustainability-focused recommendation feature that encourages eco-friendly plant choices, supporting users in building sustainable green spaces.
5. Ensure the system is secure, scalable, and responsive to meet the needs of both novice and experienced users, while promoting sustainable gardening practices.

CHAPTER 2

SYSTEM SPECIFICATIONS

2.1. HARDWARE SPECIFICATIONS

Processor: Intel Core i5 or higher

RAM: 8 GB or higher

Storage: 256 GB SSD or higher

2.2. SOFTWARE SPECIFICATIONS

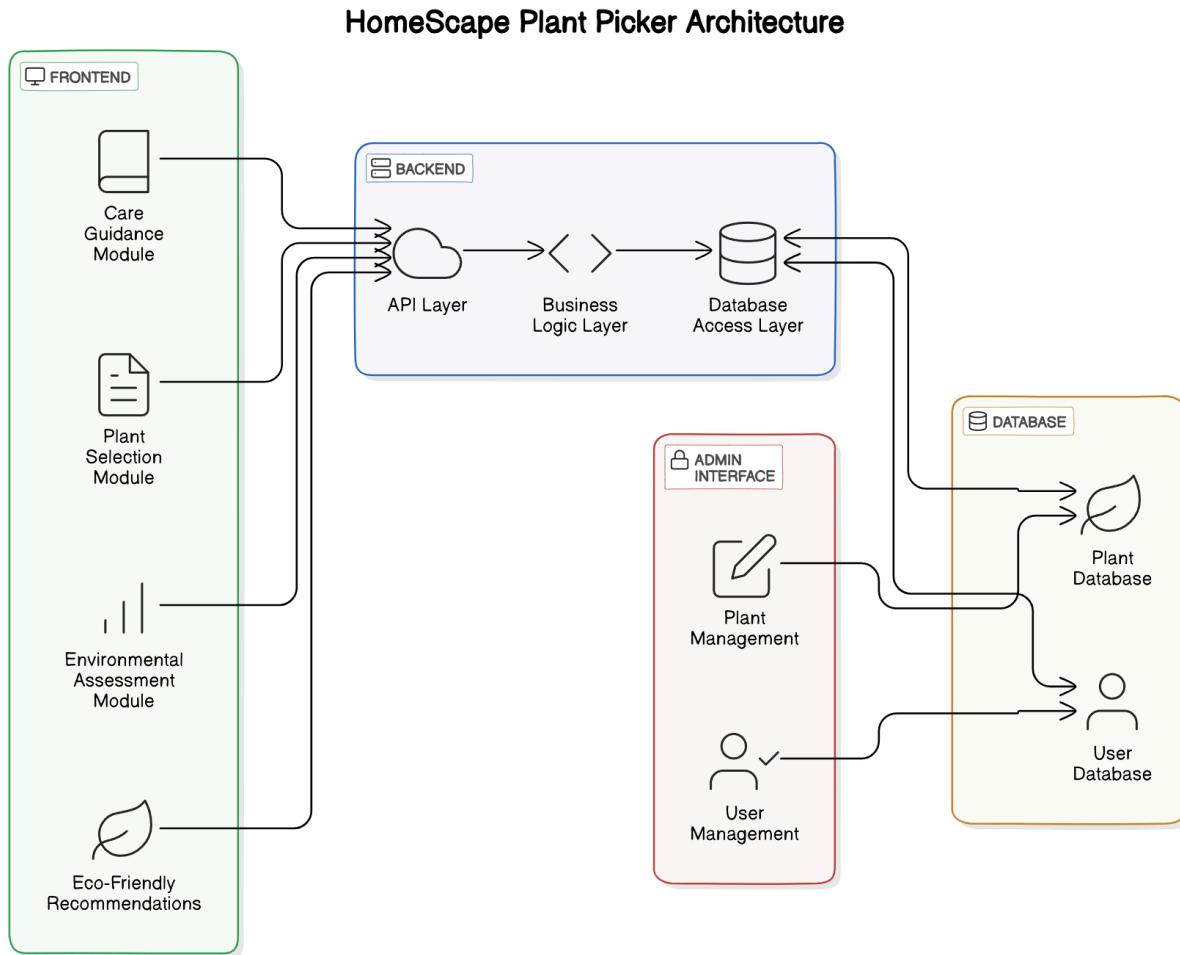
Operating System: Windows 10 / macOS / Linux

Front End: HTML, CSS, Javascript

Back End: PHP, MySQL

CHAPTER 3

ARCHITECTURE DIAGRAM



CHAPTER 4

MODULE DESCRIPTION

4.1. WELCOME MODULE

Serves as the entry point for users, introducing them to the platform. Users can browse personalized plant recommendations and access care instructions.

Features:

- **Personalized plant recommendations**
- **Interactive environmental assessment**

4.2. PLANT RECOMMENDATION MODULE

Focuses on providing users with tailored plant suggestions based on their inputs regarding sunlight, water, and space conditions.

Features:

- **Dynamic plant selection based on user inputs**
- **Filter options for eco-friendly and low-maintenance plants**

4.3. ENVIRONMENTAL ASSESSMENT MODULE

Allows users to input their home environment data (e.g., sunlight exposure, humidity, and available space) to generate suitable plant options.

Features:

- **Step-by-step care instructions**
- **Tips for troubleshooting common plant issues**

4.4. SUSTAINABILITY INFORMATION MODULE

Educes users on eco-friendly plant choices and sustainable gardening practices.

Features:

- **information on sustainable plant species**
- **Tips for environmentally responsible gardening practices**

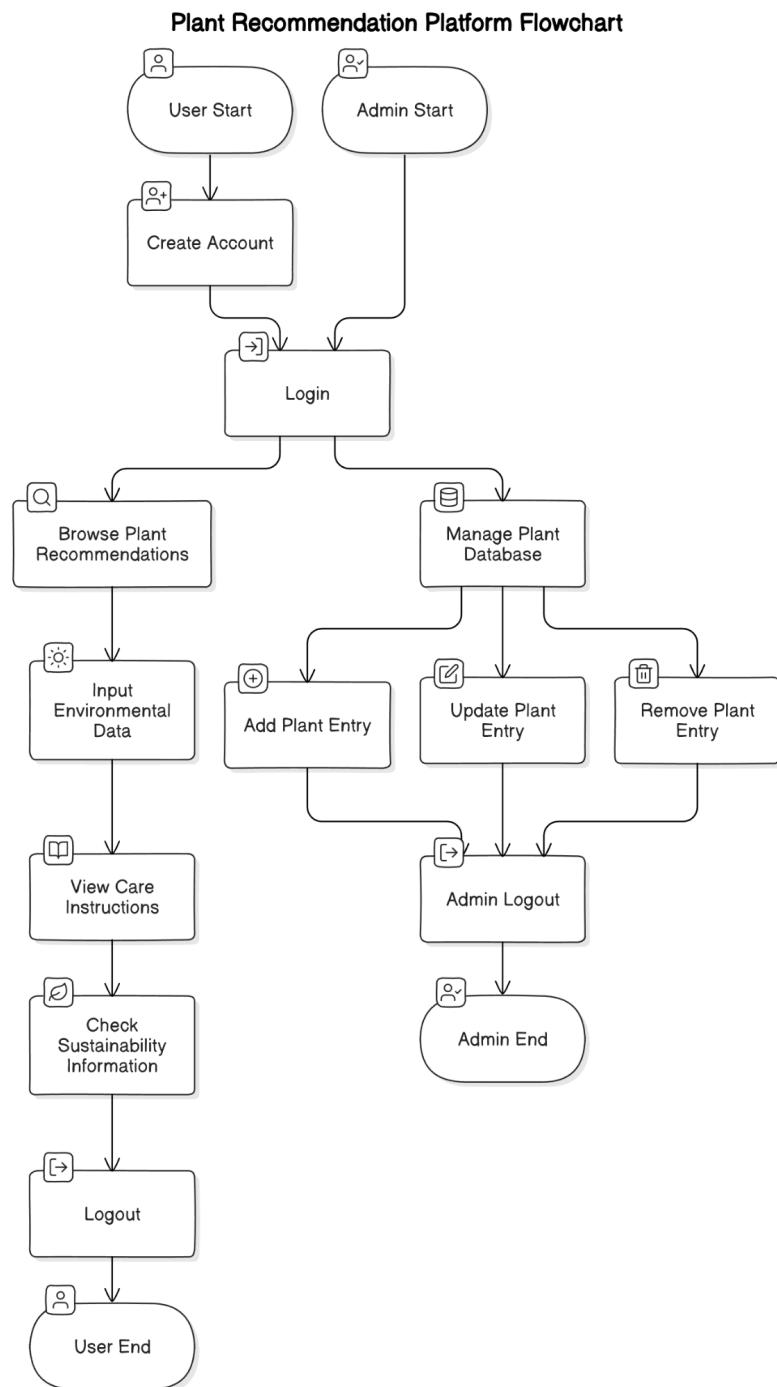
4.5. USER ACCOUNT MANAGEMENT MODULE

- **User registration and login**
- **Profile management for saving plant preferences and history**

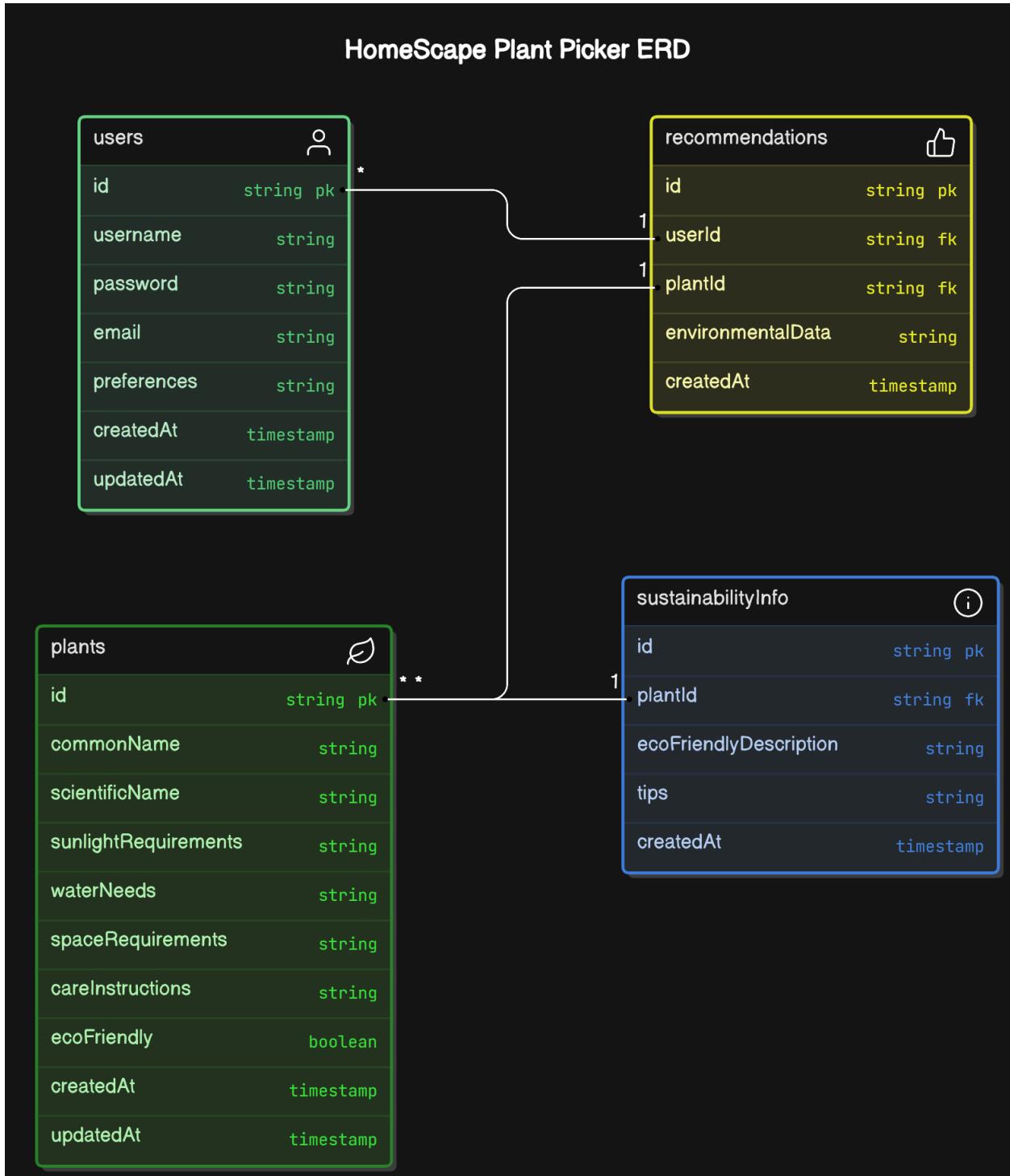
CHAPTER 5

DIAGRAMS

5.1. USE CASE DIAGRAM



5.2. ER DIAGRAM



CHAPTER 6

INDEX CODING

6.1. INDEX.HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>plants@home</title>
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css"
        rel="stylesheet"
        integrity="sha384-QWTKZyjpPEjISv5WaRU9OFeRpok6YctnYmDr5pNlyT2bRjXh0JMhjY6h
        W+ALEwIH" crossorigin="anonymous">
        <link rel="stylesheet" href="styles.css">
        <link rel="preconnect" href="https://fonts.googleapis.com">
        <link rel="preconnect" href="https://fonts.gstatic.com" crossorigin>
        <link href="https://fonts.googleapis.com/css2?family=Pacifico&display=swap"
            rel="stylesheet">
            <link rel="stylesheet"
            href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/5.15.4/css/all.min.css">

</head>
<body>
    <div class="row">
        <div class="col-12"></div>
        <nav class="navbar navbar-expand-lg navbar-light bg-success" style="height: 75px;">
```

```
<div class="container">
    <a class="navbar-brand pacifico-regular" href="index.html" style="color:#2e3531;">HomeScape Plant Picker</a>
    <button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-target="#navbarNav"
        aria-controls="navbarNav" aria-expanded="false" aria-label="Toggle navigation">
        <span class="navbar-toggler-icon"></span>
    </button>
    <div class="collapse navbar-collapse justify-content-end" id="navbarNav">
        <ul class="navbar-nav">
            <li class="nav-item">
                <a class="nav-link" href="#about">About</a>
            </li>
            <li class="nav-item">
                <a class="nav-link" href="#contactus">Contact Us</a>
            </li>
            <li class="nav-item">
                <a class="nav-link" href="signin.html">Sign In</a>
            </li>
        </ul>
    </div>
    </div>
</div>

<section class="py-5 text-center">
    <div class="container-fluid hero-section">
        <h1 class="display-4">
```

Welcome to HomeScape Plant Picker

</h1>

<p class="lead">Discover the best plants for your home, based on your unique needs and environment.</p>

<div class="d-flex justify-content-center">

Let's Plant

Learn

More

</div>

</div>

</section>

<div class="container">

<header class="bg-success text-white py-5 text-center about-section" id="about">

<h1 class="display-4 pacifico-regular">About Us</h1>

<p class="lead">Embark on a journey to transform your home into a lush, green sanctuary with our intelligent plant selection platform.</p>

<p>From low-light survivors to eco-friendly choices, we help you find the perfect plants that match your lifestyle and environment.</p>

</header>

<section class="py-5">

<div class="row">

<div class="col-md-6">

<h2>What is HomeScape Plant Picker?</h2>

<p>

HomeScape Plant Picker is an intelligent platform that helps you choose the perfect plants for your home, based on your space, environment, and preferences. Whether you're looking for plants that thrive in low light, need minimal watering, or add a touch of greenery to your space, our platform provides tailored recommendations just for you.

</p>

```
<p>
```

With HomeScape Plant Picker, create a thriving green space that aligns with your lifestyle and environmental conditions.

```
</p>
```

```
</div>
```

```
<div class="col-md-6">
```

```
    
```

```
    </div>
```

```
    </div>
```

```
</section>
```

```
<section class="py-5">
```

```
    <div class="row">
```

```
        <div class="col-md-6">
```

```
            
```

```
        </div>
```

```
        <div class="col-md-6">
```

```
            <h2>Why Choose HomeScape Plant Picker?</h2>
```

```
            <p>
```

HomeScape Plant Picker offers personalized plant recommendations based on your home's unique conditions. From assessing sunlight exposure to understanding your watering habits, we make plant selection easy and enjoyable.

```
</p>
```

```
<p>
```

Our platform ensures that your plant choices are aligned with your lifestyle, making your home greener, healthier, and more beautiful.

```
</p>
```

```
</div>
```

```
</div>
```

```
</section>

<section class="py-5">
  <div class="row">
    <div class="col-md-4">
      
        <h4>Personalized Recommendations</h4>
        <p>
          Get plant suggestions tailored to your home's environment, including sunlight levels, space, and maintenance preferences.
        </p>
      </div>
      <div class="col-md-4">
        
          <h4>Eco-Friendly Choices</h4>
          <p>
            Promote sustainable living with our selection of eco-friendly plants that thrive in your specific conditions.
          </p>
        </div>
        <div class="col-md-4">
          
            <h4>Easy to Use</h4>
            <p>
              Enjoy a user-friendly experience designed to make selecting and maintaining plants simple and enjoyable.
            </p>
          </div>
        </div>
      </div>
    </div>
  </div>
</section>
```

```
</div>
</section>

<section class="py-5 bg-light">
  <div class="container">
    <div class="row">
      <div class="col-md-6">
        <!-- Using Bootstrap for responsive iframe -->
        <div class="ratio ratio-16x9">
          <iframe
            src="https://www.youtube.com/embed/fxXXn_lWG_8?si=QnT3-ZP2v-yZkLm0"
            title="HomeScape Plant Picker Overview"
            allowfullscreen
            frameborder="0"
            allow="accelerometer; autoplay; clipboard-write; encrypted-media;
gyroscope; picture-in-picture; web-share"
            referrerpolicy="strict-origin-when-cross-origin">
          </iframe>
        </div>
      </div>
      <div class="col-md-6">
        <h2>Learn More About Growing Colourful Indoor Plants</h2>
        <p>
          Discover how you can bring vibrant hues into your home with colourful
          indoor plants. Watch the video to see how easy it is to select the perfect plants that add a splash
          of color to any room.
        </p>
        <p>

```

Our video walkthrough showcases the best tips and techniques for choosing and caring for colourful indoor plants, ensuring your indoor garden thrives all year round.

```
</p>
</div>
</div>
</div>
</section>
```

```
<section class="py-5">
  <div class="container">
    <div class="row">
      <!-- Text Area -->
      <div class="col-md-4">
        <h2>Relaxing Plant Vibes</h2>
        <p>
```

Enjoy a specially curated playlist to complement the ambiance of your green space. This playlist is perfect for setting a calming mood while you tend to your plants or just relax at home.

```
</p>
<p>
```

Tune in to these relaxing tracks and let the music harmonize with the serene atmosphere of your plant-filled space.

```
</p>
</div>
```

```
<!-- Image Area -->
<div class="col-md-4">
  
  <p class="mt-2 text-center">Curated with love for plant enthusiasts.</p>
```

```
</div>

<!-- Spotify Playlist Area -->
<!-- Responsive Spotify Embed using Bootstrap's ratio class -->
<div class="col-md-4">
    <div class="ratio ratio-1x1" style="border-radius: 12px;">
        <iframe
            src="https://open.spotify.com/embed/show/3gk3Br5arN2oi5P46UzgTR?utm_source=generator"
            width="100%"
            height="352"
            frameborder="0"
            allowfullscreen
            allow="autoplay; clipboard-write; encrypted-media; fullscreen;
picture-in-picture"
            loading="lazy">
        </iframe>
    </div>
</div>
</div>
</div>
</section>
```

```
<section class="bg-light py-5">
    <h2 class="text-center mb-4">Why Choose Us?</h2>
    <div class="row text-center">
        <div class="col-md-4">
            <div class="card h-100 shadow-sm">
                <div class="card-body">
                    <i class="bi bi-flower1" style="font-size: 2rem; color: #28a745;"></i>
```

```
<h5 class="card-title mt-3">Personalized Recommendations</h5>
<p class="card-text">Receive tailored plant suggestions based on your
home's unique conditions, including sunlight, space, and maintenance preferences.</p>
</div>
</div>
</div>
<div class="col-md-4">
<div class="card h-100 shadow-sm">
<div class="card-body">
<i class="bi bi-tree" style="font-size: 2rem; color: #28a745;"></i>
<h5 class="card-title mt-3">Eco-Friendly Choices</h5>
<p class="card-text">Promote sustainable living with our curated list of
eco-friendly plant options that help create a greener environment.</p>
</div>
</div>
</div>
<div class="col-md-4">
<div class="card h-100 shadow-sm">
<div class="card-body">
<i class="bi bi-brightness-high" style="font-size: 2rem; color:
#28a745;"></i>
<h5 class="card-title mt-3">Easy to Use</h5>
<p class="card-text">Our user-friendly interface makes it easy for anyone
to find the right plants, from beginners to seasoned gardeners.</p>
</div>
</div>
</div>
</div>
</section>
```

```
<footer class="bg-success text-white py-4 text-center">
```

```
<div class="container">  
    <p>&copy; 2024 HomeScape Plant Picker. All rights reserved.</p>  
    <p>Your friendly guide to selecting the perfect plants for your home!</p>  
  
<div class="social-icons">  
    <a href="#" class="text-white mx-2" aria-label="Facebook">  
        <i class="fab fa-facebook-f"></i>  
    </a>  
    <a href="#" class="text-white mx-2" aria-label="Twitter">  
        <i class="fab fa-twitter"></i>  
    </a>  
    <a href="#" class="text-white mx-2" aria-label="Instagram">  
        <i class="fab fa-instagram"></i>  
    </a>  
    <a href="#" class="text-white mx-2" aria-label="Pinterest">  
        <i class="fab fa-pinterest"></i>  
    </a>  
    <a href="#" class="text-white mx-2" aria-label="LinkedIn">  
        <i class="fab fa-linkedin-in"></i>  
    </a>  
    <a href="#" class="text-white mx-2" aria-label="Reddit">  
        <i class="fab fa-reddit-alien"></i>  
    </a>  
    <a href="#" class="text-white mx-2" aria-label="Discord">  
        <i class="fab fa-discord"></i>  
    </a>  
    <a href="mailto:example@example.com" class="text-white mx-2"  
        aria-label="Email">  
        <i class="fas fa-envelope"></i>  
    </a>  
</div>
```

```
<div class="footer-links mt-3" id="contactus">
    <a href="signin.html" class="text-white mx-2">Plant Now</a>
    <!-- <a href="#learn-more" class="text-white mx-2">Learn More</a> -->
    <!-- <a href="#contact" class="text-white mx-2">Contact Us</a> -->
</div>
</div>
</footer>

</div>

<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/bootstrap.bundle.min.js"
integrity="sha384-YvpcrYf0tY3lHB60NNkmXc5s9fDVZLESaAA55NDzOxhy9GkcIdslK1eN7
N6jIeHz" crossorigin="anonymous"></script>

</body>
</html>
```

CHAPTER 7

SCREENSHOTS

7.1. HOMEPAGE

The screenshot shows the homepage of the HomeScape Plant Picker website. At the top, there's a dark green header bar with the site name "HomeScape Plant Picker" in white. To the right are links for "About", "Contact Us", and "Sign In". Below the header is a large, light green banner featuring a close-up image of several large, healthy green leaves. Overlaid on this image is the text "Welcome to **HomeScape Plant Picker**" in a large, stylized font, followed by a smaller line of text: "Discover the best plants for your home, based on your unique needs and environment." At the bottom of the banner are two buttons: "Let's Plant" and "Learn More". The main content area below has a light green background. On the left, there's a dark green sidebar with the title "About Us" in white. The main content area contains the text "Embark on a journey to transform your home into a lush, green sanctuary with our intelligent plant selection platform."

This screenshot shows a section of the homepage dedicated to plant care resources. On the left, there's a video player showing a woman in a patterned dress tending to various indoor plants. The video has a "Watch on YouTube" button at the bottom. To the right of the video, the text "Learn More About Growing Colourful Indoor Plants" is displayed, along with a brief description of the video's content: "Discover how you can bring vibrant hues into your home with colourful indoor plants. Watch the video to see how easy it is to select the perfect plants that add a splash of color to any room." Below this, another section titled "Relaxing Plant Vibes" features a playlist of music. It includes a small image of a room filled with plants and a Spotify-style player card for "Organic Gardening For Beginners". The card shows a thumbnail of a smiling person, the title "001: Welcome To Organic Gardening", and a play button.

What is HomeScape Plant Picker?

HomeScape Plant Picker is an intelligent platform that helps you choose the perfect plants for your home, based on your space, environment, and preferences. Whether you're looking for plants that thrive in low light, need minimal watering, or add a touch of greenery to your space, our platform provides tailored recommendations just for you.

With HomeScape Plant Picker, create a thriving green space that aligns with your lifestyle and environmental conditions.



Why Choose HomeScape Plant Picker?

HomeScape Plant Picker offers personalized plant recommendations based on your home's unique conditions. From assessing sunlight exposure to understanding your

Why Choose Us?

Personalized Recommendations

Receive tailored plant suggestions based on your home's unique conditions, including sunlight, space, and maintenance preferences.

Eco-Friendly Choices

Promote sustainable living with our curated list of eco-friendly plant options that help create a greener environment.

Easy to Use

Our user-friendly interface makes it easy for anyone to find the right plants, from beginners to seasoned gardeners.

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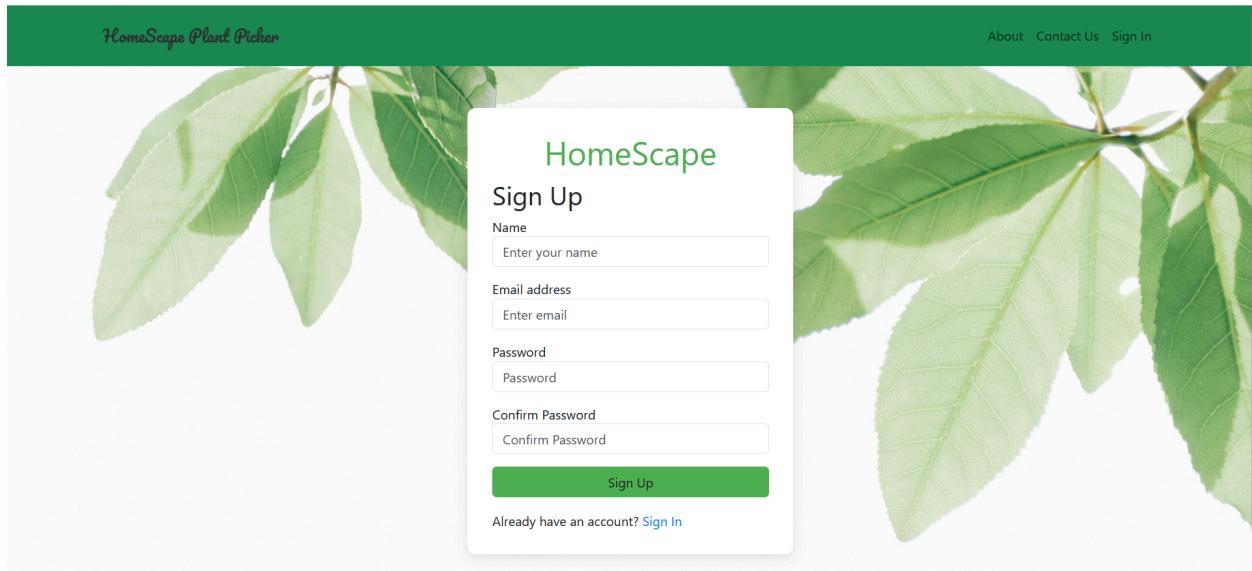
Your friendly guide to selecting the perfect plants for your home!



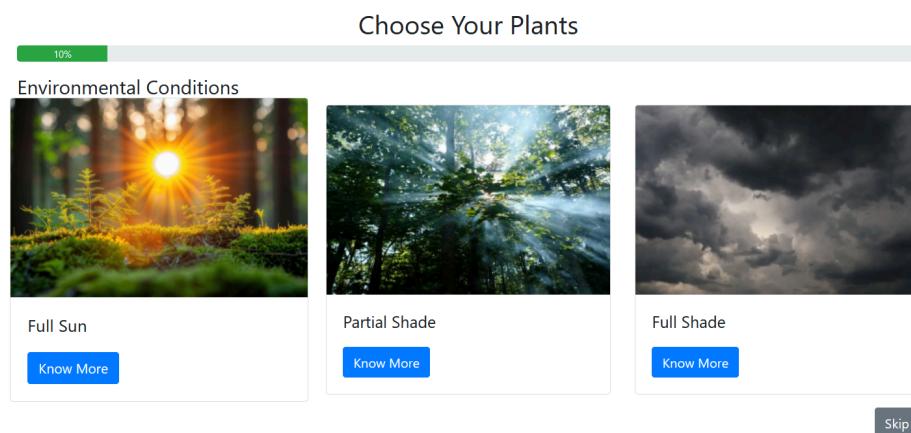
[Plant Now](#)

127.0.0.1:5502/index.html#

7.2. LOGIN PAGE



7.3. SELECTION PAGE



7.4. PLANT RECOMMENDED PAGE

Your Plant Preferences	
Summary of Your Preferences	
Preference	Details
Plant Name:	Money Plant (Pothos)
Wiki Link:	Money Plant (Pothos) Wikipedia
Environmental Conditions:	fullSun
Space Location:	indoor
Maintenance Requirement:	lowWater
Aesthetic Preferences:	green
Plant Characteristics:	flowering
Purpose:	decorative
Allergies:	petFriendly
Eco-friendliness:	native
Economic Considerations:	initialPurchase

CHAPTER 8

CONCLUSION

In conclusion, the implementation of the HomeScape Plant Picker platform is essential for enhancing the plant selection experience and promoting sustainable gardening practices among users. This system provides a structured approach to managing personalized plant recommendations, environmental assessments, and care guidance, ultimately improving user engagement and satisfaction. By integrating user-friendly interfaces with efficient backend processes, the platform enables users to access tailored plant suggestions while allowing moderators to maintain an accurate and up-to-date plant database.

Through the development of this intelligent recommendation system, HomeScape Plant Picker not only simplifies the process of selecting suitable home-growable plants but also fosters a deeper connection between users and their green spaces. By promoting eco-friendly choices and providing comprehensive care information, the platform encourages users to engage in sustainable gardening practices that benefit both individuals and the environment.

Furthermore, the potential integration of emerging technologies, such as data analytics and machine learning, can further optimize the platform's functionality, enabling predictive insights into user preferences and improving recommendation accuracy. This proactive approach will ensure that HomeScape Plant Picker remains responsive to the evolving needs of users, fostering a vibrant community of plant enthusiasts. Ultimately, a well-structured plant recommendation system is foundational for cultivating a customer-centric environment, supporting sustainable gardening, and enhancing long-term user engagement and loyalty.

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5. <https://www.w3schools.com/css/>
6. <https://www.w3schools.com/js/>
7. <https://www.w3schools.com/php/>
8. <https://www.w3schools.com/bootstrap5/>
9. <https://www.w3schools.com/jquery/>
10. <https://www.w3schools.com/mysql/>